

## ABSTRACT

An object of the present invention is to provide a method of effectively producing a nano-particle and a nano-wire, and others.

Specifically, the present invention provides a method of producing a molecular device including: the use of a molecular structure having a higher atomic density in the periphery than in the interior and bonding residues in the periphery; and a step of crosslinking the bonding residues, and the method of producing a molecular device according to claim 1, characterized in that the molecular structure is constituted by a skeleton portion having a skeleton structure, and a terminal portion which is arranged in the outer shell of the skeleton portion, has a higher atomic density than that of the skeleton portion and has bonding residues; and that in the step of crosslinking the bonding residues, the bonding residues in the terminal portion of the molecular structure are crosslinked to form the molecular structure into a shell structure, and others.